

REMARKS

Applicant thanks the Examiner for the thorough consideration given the present application.

Claims 1-7 are pending. Claims 1, 3 and 7 are amended. Claims 1, 3, 6, and 7 are independent. Moreover, the specification is amended to overcome minor informalities.

Reconsideration of this application, as amended, is respectfully requested.

Entry of Amendments

Entry of the present Amendment is respectfully requested in view of the fact that the changes herein automatically place the application in condition for allowance.

In the alternative, if the Examiner does not agree that this application is in condition for allowance, it is respectfully requested that the present Amendment be entered for the purpose of appeal. This Amendment reduces the issues on appeal by addressing the rejection to the claims made by the Examiner. This Amendment was not presented at an earlier date in view of the fact that the final Office Action contained a new rejection.

Drawings

Applicant respectfully requests a Notice of Draftsperson's Patent Drawing Review, Form PTO-948, indicating whether the formal drawings are approved, with the next official communication.

Allowable Subject Matter

Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant thanks the Examiner for the indication of allowable subject matter.

While not conceding the appropriateness of the rejection, but merely to advance prosecution of the instant application, claim 7 is rewritten in independent form including all of the limitations of claim 6, from which claim 7 depends. Therefore, claim 7 is allowable.

Rejection under 35 U.S.C. §103(a)

Claims 1-6 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,938,447 to Kirksey in view of U.S. Patent No. 6,185,538 to Schulz, and further in view of U.S. Patent No. 6,285,982 to Imai et al. This rejection is respectfully traversed.

Independent claim 1 is amended to recite a combination of steps in a method for specially reproducing sound using an information reproducing apparatus for reading out data from a recording medium having audio data and video data, wherein audio data read out from a recording medium during n-speed reproducing, where n is a positive number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed superimposed on specially reproduced images, wherein contents of the

sound which are recorded on the recording medium for n seconds are displayed during one second of the specially reproduced images.

Similarly, independent claim 3 is amended to recite a combination of elements in an information reproducing apparatus for reading out data from a recording medium having audio data and video data, wherein the audio data read out from a recording medium during n -speed reproducing, where n is a positive real number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed superimposed on specially reproduced images displayed in a display device, wherein contents of the sound which are recorded on the recording medium for n seconds are displayed during one second of the specially reproduced images.

Independent claim 6 is directed to a combination of elements in an apparatus for reproducing information for reading out data from a recording medium having audio data and video data, including a system controller for controlling a reproducing speed of the recording medium; MPEG audio and video decoders for decoding audio data and video data; an image signal processing circuit for performing a signal processing for n -speed producing, where n is a positive real number greater than 1, with respect to decoded video data; a sound recognition text conversion circuit for converting decoded audio data into text data by sound recognition; and an on-screen character processor for generating video signals displayed by superimposing the characters representing text data with the NTSC reproduced images, wherein during special reproduction performed at n -speed, the contents of audio data for n -seconds recorded on the recording medium are displayed for 1 second.

It is respectfully submitted that the combinations of elements and steps set forth in independent claims 1, 3, and 6 are not disclosed or made obvious by the prior art of record, including Kirksey, Schulz, and Imai et al.

As conceded on page 3 of the Office Action, Kirksey does not disclose an implementation of audio data read out from a recording medium during n-speed reproducing, where n is a positive number greater than 1. The Office Action relies on Imai et al. for a teaching of a sound decompressing apparatus which implements quadruple-speed search reproducing. In Imai et al., frame skip section 110 selects frames at fixed or predetermined intervals, and processes the frames at the selected intervals in bit stream unpacking section 102 if a quadruple-speed search reproducing indication is detected in input determination section 101, as shown in FIG. 1 and explained on column 3, lines 21-26. Moreover, after one frame is processed, the next three contiguous frames are skipped to process a following frame, whereby quadruple-speed reproducing is achieved, as explained on column 3, lines 30-32. Imai et al. is completely different from the present invention because whereas Imai et al. is directed to the implementation of quadruple-search reproduction based on processing of frames, the present invention is directed to reproducing and displaying sound contents based on the period of time during which the sound contents are recorded. Imai et al. does not teach or suggest displaying the contents of audio data for n-seconds recorded on the recording medium for 1 second, as recited in independent claims 1, 3 and 6.

In view of the foregoing, it is respectfully submitted that the applied prior art of record does not disclose or render obvious the present invention as recited in the independent claims.

Reconsideration and withdrawal of the rejection of the claims are, therefore, respectfully requested. It is respectfully submitted that independent claims 1, 3, and 6 are allowable. Since the dependent claims depend from allowable independent claims, they should also be allowable for at least the reasons set forth above, as well as for the additional limitations provided by these claims. Accordingly, all pending claims should be in condition for allowance.

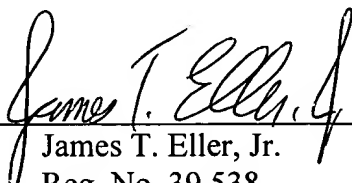
Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If any issues remain, however, the is invited to telephone Sam Bhattacharya (Reg. No. 48,1070 at 703-205-8000 in an effort to expedite prosecution.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,
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Reg. No. 39,538

MARKED-UP COPY OF AMENDED SPECIFICATION AND CLAIMS

IN THE SPECIFICATION:

The paragraph beginning on page 6, line 14, has been replaced with the following paragraph:

-- Continuously, the D/A converter 11 converts [a] the video data outputted from the image signal processing circuit 10 into video signals, and the NTSC video encoder 12 outputs the analog video signal into NTSC video signals. --

The paragraph beginning on page 7, line 15, has been replaced with the following paragraph:

-- The audio data processed by the data analysis processing unit 31 is [send] **sent** to the data conversion processing unit 34, and is once stored in the second memory 32. --

IN THE CLAIMS:

Claims 1, 3 and 7 have been amended as follows:

1. (Twice Amended) A special reproducing method for specially reproducing sound by using an information reproducing apparatus for reading out data from a recording medium having audio data and video data, wherein the audio data read out from a recording medium during n-speed reproducing, where n is a positive number greater than 1, is converted into text data by sound recognition, and the characters representing text data are

displayed superimposed on specially reproduced images, wherein contents of the sound which are recorded on the recording medium for n seconds are displayed during 1 second of the specially reproduced images.

3. (Twice Amended) An information reproducing apparatus for reading out data from a recording medium having audio data and video data, wherein the audio data read out from a recording medium during n-speed reproducing, where n is a positive real number greater than 1, is converted into text data by sound recognition, and the characters representing text data are displayed superimposed on specially reproduced images displayed in a display device, wherein contents of the sound which are recorded on the recording medium for n seconds are displayed during 1 second of the specially reproduced images.

7. (Amended) [The] An information reproducing apparatus [of claim 6,] for reading out data from a recording medium having audio data and video data, comprising:

a system controller for controlling a reproducing speed of the recording medium;

MPEG audio and video decoders for decoding audio data and video data;

an image signal processing circuit for performing a signal processing for n-speed producing, where n is a positive real number greater than 1, with respect to decoded video data;

a sound recognition text conversion circuit for converting decoded audio data into text data by sound recognition; wherein the sound recognition text conversion circuit comprises:

a data analysis processing unit for analyzing the audio data according to speed change information from the system controller and for improving the accuracy of sound recognition by suppressing unnecessary noise;

a data table for registering the text data and the corresponding audio data; and

a data conversion processing unit for integrating the timing of the audio data from the data analysis processing unit with the timing of the audio data from the data table, and searching audio data from the data table nearest to the audio data from the data analysis processing unit by comparing each audio data and receiving the text data corresponding to the audio data from the data table; and

an on-screen character processor for generating video signals displayed by superimposing the characters representing text data with the NTSC reproduced images,

wherein, during special reproduction performed at n-speed, the contents of audio data for n-seconds recorded on the recording medium are displayed for 1 second.